

-2- (WPAT)

AN - 95-212847/28

XRAM- C95-098267

TI - Antibacterial agents - contain clay with cations substd. by amine-metal and/or amine-metal complex ions

DC - C03 D22

PA - (SHIS ) SHISEIDO CO LTD

NP - 1

NC - 1

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AB - (JP07126120-A)

Antibacterial agents contains clay where cations locating between layers have been substd. by amine-metal complex ions and/or amine-metal complex ions.

The metals are e.g. Ag, Cu, Zn, etc., pref. Ag. The clay is water-swelling clay which possesses the cation-exchangeable capacity of 40-150 m eg. per 100 g of clay. The ligand of the amine-metal complex ions and amine-metal complex ions include, e.g., ammonia, ethylamine, ethylenediamine, diethylene triamine, triethylenetetramine, tetraethylenepentaamine, monoethanolamine, etc. Amt. of the metal ions is 1-150 m eg., pref. 5-100 m eg. per 100 g of clay.

USE/ADVANTAGE - The agents are useful as antibacterial agents. The agents exhibit excellent antibacterial activities against broad range of microorganisms, are easy to handle, have good appearance in colour tone and are safe for human bodies.

In an example, 12 g  $\text{NH}_4\text{NO}_3$  was dissolved in 200 ml.  $\text{CH}_3\text{OH}$  soln. contg. 28 % ammonia water (0.4 %). To this was dispersed well 30 g LAPONITE XLG (RTM: sic) and stirred at room temp. for 1 hr. to disperse. The ppte. was filtered, dried at 110 deg. C for 4 hrs. and dispersed in 200 ml.  $\text{CH}_3\text{OH}$  soln. contg. 28 % ammonia water (2 %) in which 1.02 g  $\text{AgNO}_3$  was dissolved. The soln. was stirred at room temp. for 6 hrs. to disperse, filtered, washed and dried at 160 deg. C. for 6 hrs. to give a white antibacterial agent contg. 20 m eg. Ag per 100 g LAPONITE XLG (RTM: sic). The agent is active against *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus*, *Propionibacterium acnes*, *Trichophyton mentagrophytes*, etc. (Dwg.0/0)

FN - WPF4K8F1.GIF